The Gradient Of The Attraction Force And The Locomotive Faculty Of Plates Caused By The Lack Of The Gradient Of Plates

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1. The gradient of the attraction force As seen in Figure 1, when the low latitudes bulges by the centrifugal force (hereinafter referred to as flotation), small attraction force comes up between this part of floatation and objects, and as the integrant of the attraction force toward the equator, it joins in the attraction force. Consequently the attraction force causes gradient toward the equator.

The explanation drawing evaluating the obliquity of the attraction force is shown in Figure 2, but the explanation is skipped for want of space and only shows the result. The thickness of the plate is calculated as 100km and the floatation of the equator 21384.68m as well. The values of 80, 65, 45, 25, 10 degrees of longitude come up as below.

A. The obliquity of the attraction force for [polar radius] on the spherical surface.

0.033624 0.075333 0.098401 0.075417 0.033678 degrees.

B. The obliquity of [polar radius - the thickness of the plate] on the spherical surface. 0.033460 0.074913 0.097701 0.074766 0.033364 degrees.

This obliquity, based on the value of 45 degrees of longitude and for example becomes an approximate value by 0.098401 x sin2E. E stands for longitude.

2. The lack of the gradient of the plate and the locomotive force I evaluate and weigh the gradient of the attraction force, the gradient of gravity, and the gradient of the plate. Here I suppose the mass of the plate gathers in the midst of the thickness of the plate. Please see Figure 1. The value on 45 degrees of longitude.

The gradient of the attraction force in the midst of the thickness of the plate. As the average value of above A and B, 0.098051 degrees.

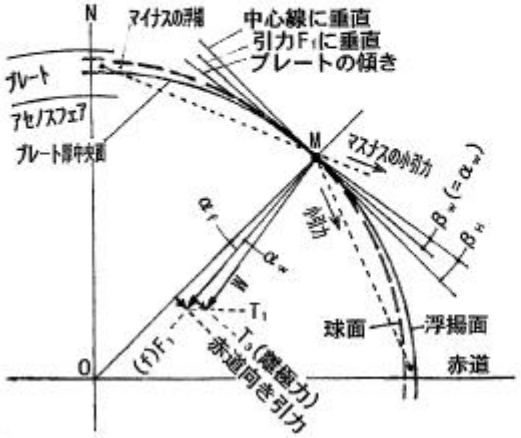
The gradient of gravity in the midst of the thickness of the plate. Calculated as the force of divagating the pole = the force of approaching the pole, 0.097928 degrees.

The gradient of the plate in the midst of thickness. Calculated as [the equatorial radius - 50km] and [the polar radius - 50km], 0.193946 degrees.

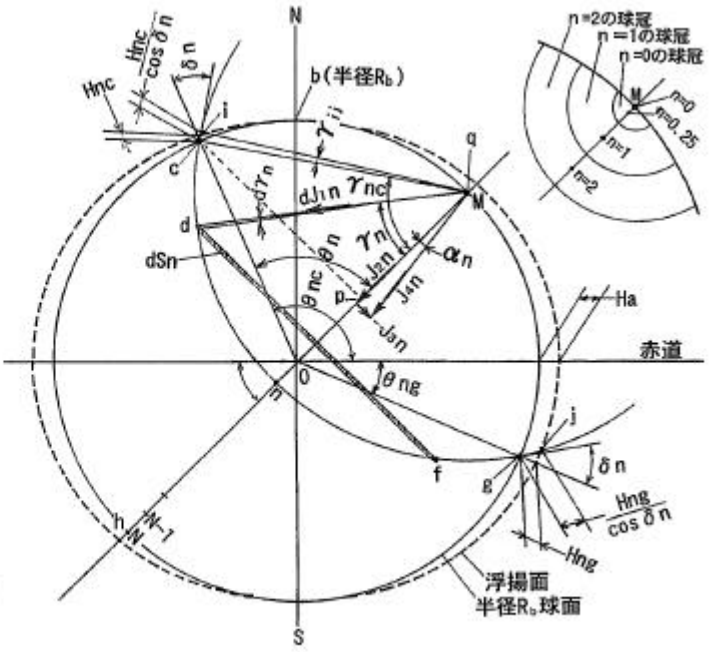
Comparing these obliquities, it comes out that the gradient of the plate - (the gradient of the attraction force + the gradient of gravity) = -0.002033 degrees, and the plate is slightly lack of the gradient. This reveals the opposite result of the generally told exorbitance of the gradient. This lack of the gradient causes the integrant of the attraction force toward the equator remain on the plate, and it keeps working as the locomotive faculty of the plate (the motive force of the continental drift). The value as shown in the following formula accumulates toward the equator.

The locomotive faculty = mass x attraction force x sin(0.002033 x sin2E)

3. The celerity of the rise and fall movement of the earth's crust In order to explore the possibilities of the lack of the gradient, from the crustal tide I figure the speed of response of the rise and fall movement of the earth's crust. Assuming that the rise and fall movement of the earth's crust is 30cm, the cumulative variation becomes 30 x 4 = 1.2m in a day. If simply expected this variation for the elimination of the generally told exorbitance of the floatation (about 10.6km), it will need about 8833 days(24.2 years). It is quite fast celerity of distortion. The lack of the floatation may be expected depending on conditions.



第１図．引力傾き・重力傾き・プレート傾きの関係



第２図．引力傾きを求める説明図，（その一例）